1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/21/09 has been entered.

2. Claims 1,5,10,13,15,22,26-27,31,34,38-39,43-44,48-51,57,61-63 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation "each filament consisting of a single structure comprising a hollow or solid filament having a continuous or short filament length and which gather said hollow and solid or hollow continuous and/or short filament gather adjacent ones" render the claims vague and indefinite. It is not clear what is gathering the filaments. The clause of the claim is not fully understood as written. It appears that the claim intends to claim a material wherein the fibers are entwined and contacting each other and are fused/bonded to each other and the claims will be interpreted in this way for purposes of the art rejection below.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 5, 13, 15, 22, 26-27, 31, 34, 38-39, 43-44, 48, 57, 61-63 rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al, U.S. Patent No. 5,972,463 in view of Kargol et al, U.S. patent No. 5,492,662 for the reasons set forth in the previous action, and further in view of Hazelton et al, U.S. Patent No. 4,804,577. Martin et al discloses open, nonwoven webs made from thermoplastic filaments (col. 1, lines 8-17). The nonwoven material finds use as, among other things, a cushioning web, (col. 7, lin1). The web may be made from helically shaped or coiled filaments, (figure 4), interengaged into a desired ordered or random pattern to a desired web weight (column 7, line 51 --column 8, line 2). The filaments are made from a mixture of polymers. Examples of the polymers include polyolefins, such as polyethylene and polypropylene, and ethylene vinyl acetate (column 17, lines 31-64). A blend of polyethylene and/or polypropylene with poly (vinyl acetate) is also disclosed.

The substrate can be embossed, thus creating an increase in bulk density in the width direction at spaced intervals of length (Figure 24 and column 20, lines 35-62).

Martin et al. fail to disclose the nonwoven to have a uniform thickness when made with varying density. Kargol et al. disclose a cushion material made from polymeric fibers with varying zones of density (Abstract). Kargol et al. disclose that using their method for forming a cushion creates a material superior in comfort and durability (column 5, lines 47-49). It would have been obvious to one having ordinary skill in the art to use the method of providing varying density disclosed by Kargol et al. in the nonw0ven of Martin et al. in order to make a more comfortable cushion. Although the mold of Kargol et al. displayed in the figures does not give a nonwoven with a

uniform thickness because, Kargol et al. disclose that the dimensions of the mold cavity may be altered and such alterations can easily be determined by one of skill in the art (column 21 lines 6-9). In Figures 3-5, the cushion created by Kargol et al. is not uniformly thick because it is being used to create a car seat (See Figure 5). However, a person of ordinary skill in the art might not want such a particularized end usage to the product, and Kargol et al. teach using a mold cavity of any desired shape for the end product (column 6, lines 5-10). It would have been obvious to one having ordinary skill in the art to form a nonwoven with a uniform thickness in order to create a cushion pad not having a particularized end usage, as taught to be known by Kargol et al.

Both Martin et al. (Figure 24) and Kargol et al. (Figure 4)
disclose areas of low density and areas of high density. With regard to claim 5, Martin et al. disclose the ethylene-vinyl acetate can be used as the low melting component (b) and that polypropylene can be used as the higher melting component (a) (column 18, lines 31-36). However, Martin et al. do not disclose how much of the fiber is made of component (a) and how much is made of component (b). Martin et al. do teach that component (a) provides the structural role in the fibrous material, whereas component (b) provides an adhesive function to the web (column 23, lines 35-54). Since the material of Martin et al. is used as an abrasive article or cushioning material, it would likely be inherent for the fibers of the nonwoven to comprise 70 to 97% polyolefin for structure and 3 to 30% EVA for bonding. If not inherent, it would have been obvious to a person having ordinary skill in the art to create the nonwoven web of Martin et al. with a higher ratio of structural material and lower level of bonding material in order to

provide a rigid web material with a sufficient amount of bonding agent, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. With regard to claims 13-16, Martin et al. disclose the filaments to have a diameter of 0.5 to 25 mm (column 4, lines 52-61). With regard to claims 22 and 26 and 34 and 38, neither Martin et al. nor Kargol et al. disclose the bulk density of the nonwoven Web. Martin et al. do teach the bulk density or void volume can be varied (column 13, lines 55-63) and Kargol et al. teach that desired densities are obtained by adjusting the amount of fibers placed within any given zone of the mold (column 2, lines 10-18). Thus, altering the density would be result effective variable that that is adjusted by changing the amount of fiber used in the mold. Absent any unexpected results that arrive from using the claimed densities, it would have been obvious to a person having ordinary skill in the art to make the nonwoven web have a density within the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ 233. With regard to claim 27, the web material of Martin et al. (column 7, line 1) and Kargol et al. (column 5, line 47) may be used as a cushioning web. Martin et al. disclose
the web can be made from hollow filaments (column 5, lines 22-24). Therefore, a web made in this embodiment would have from 50 to 100% hollow filaments. With regard to claims 57 and 61, Martin et al. discloses using both hollow and solid filaments (column 5, line 23). It would have been obvious to one having ordinary skill in the art to provide hollow filaments for lower weight to the nonwoven web surrounded by solid filaments to

provide structural integrity to the corresponding hollow filaments. With regard to claim 62, forming the differing areas of bulk density by changing take-off speed is a processing limitation. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." Although Kargol et al provide the different densities by use of a different method, the final product would still meet the claimed product limitations because areas of low and high density are formed. Martin et al differs from the claimed invention because Martin generally employs fibers which have a sheath/core or side-by-side configuration, while the instant claims recite a "single component" structure, which is interpreted as a blend of polymers, although it does teach forming blends and multiconstitutent fibers generally. Hazelton et al teaches that nonwoven fabrics with improved extensibility, texture and hand can be formed by employing fibers which are a blend of a polymer such as a polyolefin or a styrene butadiene styrene with another polymer such as a vinyl acetate polymer. See abstract and col. 2, line 45 – col. 3, line 51. Therefore, it would have been obvious to have employed fibers having a blended structure as the multi constituent fibers of Martin, motivated by the teaching of Hazelton, that using the blended fibers improved the extensibility, texture and hand of the resulting fabric.

4. With regard to the particularly claimed density, since Martin et al teaches that the bulk density or void volume can be varied at col. 13, lines 55-63 and Kargol et al teach that the desired density can be obtained by adjusting the amount of fibers placed within any given zone of the mold, ( col. 2, lines 10-18), altering the density would be a result effective variable that can be adjusted by changing the amount of fiber used in the mold, and therefore, absent any unexpected results, it would have been obvious to one of ordinary skill in the art to have made the nonwoven web having a density within the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. With regard to the limitation regarding the hollow filaments, Martin teaches that the web can be made from hollow filaments.

5. Claims 10, 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al in view of Kargol and Hazelton as applied to claims above, and further in view of Insley et al, U.S. Patent No. 5,451,437 as set forth in the previous action.

6. Applicant's arguments filed 5/28/09 have been fully considered but they are not persuasive.

7. Applicant's amendment has overcome the 112 rejections previously set forth.

8. Applicant argues that the main thrust of Martin is to use bicomponent fibers. While this is true, Hazelton teaches that fibers which are made of fiber blends can be employed which produce certain improved properties in the nonwoven, such as hand, extensibility/ , etc.

9. Applicant argues that the rejection is conclusatory by stating that by using a blend of resins as taught by Hazelton in the structure of Martin that the structure will be improved in terms of hand, extensibility and texture. However, Hazelton teaches that employing a blend produces fabrics having the improved properties.

10. Applicant argues that Martin is directed to floor mats and abrasive articles and that to change the density as taught by Kargol would be a drawback to the material of Martin. However, Martin already teaches embossing the structure, which creates an increase in bulk density. See figure 24 and column 20, lines 35-62. Also, it is noted that the material of Martin can also be used as a cushioning web, (col. 7, line 1).

11. Applicant argues that in Kargol, the web is coated but in Martin the web is not coated. However, the claims neither require nor preclude coating. Further, In response to applicant's argument that Kargol's web is coated while Martin's is not, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Also, it is noted that both coated and uncoated webs can be made to have varying densities, as shown in the cited references. In order to modify the Martin reference as taught by Kargol does not require coating the Martin fibers.

12. With regard to the bulk density, it is noted that embossing a nonwoven fibrous structure, which is done with heat and pressure to form compressed bonded areas, will necessarily increase the density of those areas as compared to the unembossed areas.

13. If the claims were amended to clarify the 112 2nd paragraph noted above and two clarify that the filaments consist of a blend of two polymers, a polyolefin and one of either vinyl acetate, ethylene vinyl acetate copolymer or styrene butadiene styrene, the art rejection of record would be over come. As currently written, the "consisting of" recitation is read as limiting the single body, not the mixture of polymers making up the filament. The art does disclose or render obvious filaments as claimed consisting of a mixture of two polymers which are melted and kneaded in combination with the other limitations as set forth in the independent claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

The examiner's supervisor Rena Dye may be reached at (571) 272-3186.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/Elizabeth M. Cole/

Primary Examiner, Art Unit 1794

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